

Agile Artificial Intelligence development for Real World Solutions

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Artificial Intelligence revived in the last decade. The need for progress, the growing processing capacity and the low cost of the Cloud have facilitated the development of new, powerful algorithms. The efficiency of these algorithms in Big Data processing, Deep Learning and Convolutional Networks is transforming the way we work and is opening new horizons. Thanks to them, we can now analyse data and obtain unimaginable solutions to today's problems. Nevertheless, our success is not entirely based on algorithms, it also comes from our ability to follow our "gut" when choosing the best combination of algorithms for an intelligent artefact. Their development involves the use of both connectionist and symbolic systems, that is to say data and knowledge. Moreover, it is necessary to work with both historical and real-time data. It is also important to consider development time, costs and the ability to create systems that will interact with their environment, will connect with the objects that surround them and will manage the data they obtain in a reliable manner.

This is where the role of tools such as Deep Intelligence comes into play, they are essential because they allow us to capture all types of data, from sensors, databases, internet, social networks and other sources. Such tools then visualize the data they have captured, complete them or normalize them if necessary and finally use them to create highly sophisticated models. In the case of Deep Intelligence, dashboards can also be created so as to fully adapt to the nature of each problem [1-121]. Moreover, tools of this type help us choose the best algorithm and optimize it so that it meets the needs of the problem to be solved. Deep Intelligence brings Machine Learning closer to society and socializes AI.

In this keynote, the evolution of intelligent computer systems will be examined. The need for human capital will be discussed, as well as the need to follow one's "gut instinct" in problem-solving.

This keynote will analyse the importance of IoT, Blockchain and Edge Computing as contributors to the development of "deep tech" distributed intelligent systems that have the capacity to interact with the environment. "Smart" infrastructures need to incorporate all added-value resources so they can offer useful services to the society, while reducing costs, ensuring reliability and improving the quality of life of the citizens [122-218]. The combination of AI, IoT and Blockchain in an Edge Computing model or elsewhere, offers a world of possibilities and opportunities.

Smart cities, bioinformatics, smart grids, industry 4.0, etc. will experience major improvements if AI is used in a wise and sustainable manner. As part of this keynote several use cases of intelligent systems will be presented and it will be analysed how

the processes of implementation and use have been optimized by means of different tools [219-221].

References:

1. Antonio Pinto, Ricardo Costa (2016). Hash-chain-based authentication for IoT. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 4
2. Adrián Sánchez-Carmona, Sergi Robles, Carlos Borrego (2015). Improving Podcast Distribution on Gwanda using PrivHab: a Multiagent Secure Georouting Protocol. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 1
3. Adriana Fernández-Fernández, Cristina Cervelló-Pastor, Leonardo Ochoa-Aday (2016). Energy-Aware Routing in Multiple Domains Software-Defined Networks. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 3
4. Alberto Rivas, Pablo Chamoso, Alfonso González-Briones, Roberto Casado-Vara, Juan Manuel Corchado (2019). Hybrid job offer recommender system in a social network. Expert Systems 36(4)
5. Ana Silva, Tiago Oliveira, José Neves, Paulo Novais (2016). Treating Colon Cancer Survivability Prediction as a Classification Problem. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 1
6. Anderson Sergio, Sidartha Carvalho, Marco Rego (2014). On the Use of Compact Approaches in Evolution Strategies. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 3, n. 4
7. Ángel Martín del Rey, F. K. Batista, A. Queiruga Dios (2017). Malware propagation in Wireless Sensor Networks: global models vs Individual-based models. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 6, n. 3
8. Angelo Costa, Stella Heras, Javier Palanca, Paulo Novais, Vicente Julián (2016). Persuasion and Recommendation System Applied to a Cognitive Assistant. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 2
9. Anna Závodská, Veronika Šramová, Anne-Maria AHO (2012). Knowledge in Value Creation Process for Increasing Competitive Advantage. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 1, n. 3
10. Alexandre Silvestre Ferreira, Aurora Pozo, Richard Aderbal Gonçalves (2015). An Ant Colony based Hyper-Heuristic Approach for the Set Covering Problem. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 1
11. Amir Hosein Keyhanipour, Behzad Moshiri (2013). Designing a Web Spam Classifier Based on Feature Fusion in the Layered Multi-Population Genetic Programming Framework. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 3

12. Ana Cristina Bicharra, Nayat Sanchez-Pi, Luis Correia, José Manuel Molina (2012). Multi-agent simulations for emergency situations in an airport scenario. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 1, n. 3
13. Ana Oliveira Alves, Tiago Dias, David Silva (2015). A Real-Time, Distributed and Context-Aware System for Managing Solidarity Campaigns. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 4, n. 2
14. Asset Management System through the design of a Jadex Agent System (2016). Javier Carbó, José M. Molina, Miguel A. Patricio. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 5, n. 2
15. Baruque, B., Corchado, E., Mata, A., & Corchado, J. M. (2010). A forecasting solution to the oil spill problem based on a hybrid intelligent system. *Information Sciences*, 180(10), 2029–2043.
<https://doi.org/10.1016/j.ins.2009.12.032>
16. Bogdan Okresa Durik. (2017) Organisational Metamodel for Large-Scale Multi-Agent Systems: First Steps Towards Modelling Organisation Dynamics. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 6, n. 3
17. Borrajo Diz María Lourdes, Yáñez J. Carlos, Corchado Juan M. (2002). A CBR System to Assist the Internal Control Process of a Firm. *ECCBR Workshops 2002*: 23-26
18. Borrajo, M. L., Baruque, B., Corchado, E., Bajo, J., & Corchado, J. M. (2011). Hybrid neural intelligent system to predict business failure in small-to-medium-size enterprises. *International journal of neural systems*, 21(04), 277-296.
19. Borrajo, M. L., Corchado, J. M., Yáñez, J. C., Fdez-Riverola, F., & Díaz, F. (2005, August). Autonomous internal control system for small to medium firms. In *International Conference on Case-Based Reasoning* (pp. 106-121). Springer, Berlin, Heidelberg.
20. Buciarelli, E., Silvestri, M., & González, S. R. (2016). Decision Economics, In *Commemoration of the Birth Centennial of Herbert A. Simon 1916-2016 (Nobel Prize in Economics 1978): Distributed Computing and Artificial Intelligence, 13th International Conference. Advances in Intelligent Systems and Computing* (Vol. 475). Springer.
21. Canizes, B., Pinto, T., Soares, J., Vale, Z., Chamoso, P., & Santos, D. (2017). Smart City: A GECAD-BISITE Energy Management Case Study. In *15th International Conference on Practical Applications of Agents and Multi-Agent Systems PAAMS 2017, Trends in Cyber-Physical Multi-Agent Systems* (Vol. 2, pp. 92–100). https://doi.org/10.1007/978-3-319-61578-3_9
22. Carlos Alberto Ochoa, Lourdes Yolanda Margain, Francisco Javier Ornelas, Sandra Guadalupe Jiménez, Teresa Guadalupe Padilla (2014). Using multi-objective optimization to design parameters in electro-discharge machining by wire. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 3, n. 2
23. Carlos Carvalhal, Sérgio Deusdado, Leonel Deusdado (2013). Crawling PubMed with web agents for literature search and alerting services. *ADCAIJ:*

- Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 1
24. Carolina González, Juan Carlos Burguillo, Martín Llamas, Rosalía Laza (2013). Designing Intelligent Tutoring Systems: A Personalization Strategy using Case-Based Reasoning and Multi-Agent Systems. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 1
 25. Casado-Vara, R., & Corchado, J. (2019). Distributed e-health wide-world accounting ledger via blockchain. *Journal of Intelligent & Fuzzy Systems*, 36(3), 2381-2386.
 26. Casado-Vara, R., Chamoso, P., De la Prieta, F., Prieto J., & Corchado J.M. (2019). Non-linear adaptive closed-loop control system for improved efficiency in IoT-blockchain management. *Information Fusion*.
 27. Casado-Vara, R., de la Prieta, F., Prieto, J., & Corchado, J. M. (2018, November). Blockchain framework for IoT data quality via edge computing. In *Proceedings of the 1st Workshop on Blockchain-enabled Networked Sensor Systems* (pp. 19-24). ACM.
 28. Casado-Vara, R., Novais, P., Gil, A. B., Prieto, J., & Corchado, J. M. (2019). Distributed continuous-time fault estimation control for multiple devices in IoT networks. *IEEE Access*.
 29. Casado-Vara, R., Vale, Z., Prieto, J., & Corchado, J. (2018). Fault-tolerant temperature control algorithm for IoT networks in smart buildings. *Energies*, 11(12), 3430.
 30. Casado-Vara, R., Prieto-Castrillo, F., & Corchado, J. M. (2018). A game theory approach for cooperative control to improve data quality and false data detection in WSN. *International Journal of Robust and Nonlinear Control*, 28(16), 5087-5102.
 31. Chamoso, P., de La Prieta, F., Eibenstein, A., Santos-Santos, D., Tizio, A., & Vittorini, P. (2017). A device supporting the self-management of tinnitus. In *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (Vol. 10209 LNCS, pp. 399–410). https://doi.org/10.1007/978-3-319-56154-7_36
 32. Chamoso, P., González-Briones, A., Rivas, A., De La Prieta, F., & Corchado, J. M. (2019). Social computing in currency exchange. *Knowledge and Information Systems*, 1-21.
 33. Chamoso, P., González-Briones, A., Rodríguez, S., & Corchado, J. M. (2018). Tendencies of technologies and platforms in smart cities: a state-of-the-art review. *Wireless Communications and Mobile Computing*, 2018.
 34. Chamoso, P., González-Briones, A., Rodríguez, S., & Corchado, J. M. (2018). Tendencies of technologies and platforms in smart cities: A state-of-the-art review. *Wireless Communications and Mobile Computing*, 2018.
 35. Chamoso, P., Raveane, W., Parra, V., & González, A. (2014). Uavs Applied to the Counting and Monitoring Of Animals. In *Advances in Intelligent Systems and Computing* (Vol. 291, pp. 71–80). https://doi.org/10.1007/978-3-319-07596-9_8
 36. Chamoso, P., Rivas, A., Martín-Limorti, J. J., & Rodríguez, S. (2018). A Hash Based Image Matching Algorithm for Social Networks. In *Advances in*

- Intelligent Systems and Computing (Vol. 619, pp. 183–190).
https://doi.org/10.1007/978-3-319-61578-3_18
37. Chamoso, P., Rodríguez, S., de la Prieta, F., & Bajo, J. (2018). Classification of retinal vessels using a collaborative agent-based architecture. *AI Communications*, (Preprint), 1-18.
38. Christian Paulo Villavicencio, Silvia Schiaffino, J. Andrés Díaz-Pace, Ariel Monteserin (2016). A Group Recommendation System for Movies based on MAS. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 5, n. 3
39. Constantino Martins, Ana Rita Silva, Carlos Martins, Goreti Marreiros (2014). Supporting Informed Decision Making in Prevention of Prostate Cancer. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 3, n. 3
40. Corchado J. M. (1995). Multi agent tools: a case study, *IEEE Conf K. D.* London, UK
41. Corchado J. M. (1995). Neuro-symbolic reasoning-a solution for complex problems, *International Conference On Intelligent Systems*, 1-3, London, UK.
42. Corchado J.M. , Lees B. (1996). Case-Base Reasoning Recommendation System. *IEEE Colloquium on knowledge discovery*, UK.
43. Corchado Juan M. (1997). Adaptive Hybrid System Architecture for Forecasting. *AAAI/IAAI 1997*: 808
44. Corchado Juan M. (2000). Resumen Mesa de Trabajo sobre Agentes Inteligentes y Sistemas Multiagente. *Inteligencia Artificial, Revista Iberoamericana de Inteligencia Artificial* 4(9): 6-7.
45. Corchado Juan M., Laza Rosalía (2002) Construction of BDI Agents from CBR systems. *German Workshop on Experience Management 2002*: 47-60
46. Corchado, E. S., Corchado, J. M., & Aiken, J. (2004). Ibr retrieval method based on topology preserving mappings. *Journal of Experimental & Theoretical Artificial Intelligence*, 16(3), 145-160.
47. Corchado, E. S., Corchado, J. M., Sáiz, L., & Lara, A. (2004, July). A beta-cooperative cbr system for constructing a business management model. In *Industrial Conference on Data Mining*(pp. 42-49). Springer, Berlin, Heidelberg.
48. Corchado, E., Corchado, J. M., Sáiz, L., & Lara, A. (2004, September). Constructing a global and integral model of business management using a cbr system. In *International Conference on Cooperative Design, Visualization and Engineering* (pp. 141-147). Springer, Berlin, Heidelberg.
49. Corchado, J. (1995). CBR systems, an overview. In *International Conference on Intelligent Systems*. London, England, Uk.
50. Corchado, J. (1998). Real time forecast with intelligent systems. *Conference on Knowledge Discovery*. IEE, Savoy Place, London.
51. Corchado, J. A., Aiken, J., Corchado, E. S., Lefevre, N., & Smyth, T. (2004). Quantifying the Ocean's CO2 budget with a CoHeL-IBR system. In *Advances in Case-Based Reasoning, Proceedings* (Vol. 3155, pp. 533–546).

52. Corchado, J. M. (1997). BDI multiagent hybrid architecture for project management. In IEEE COLLOQUIUM ON KNOWLEDGE DISCOVERY AND DATA MINING. LONDON ENGLAND.
53. Corchado, J. M. (1997). Real time forecast with intelligent systems: Cbrs and anns. In WORKSHOP ON ARTIFICIAL NEURAL NETWORKS. ABERDEEN (pp. 1-3).
54. Corchado, J. M. (1997). System for decision making: a practical case. In CONFERENCE ON KNOWLEDGE DISCOVERY AND DATA MINING. IEE, LONDON, UK.
55. Corchado, J. M. (1998). Models for integrating artificial intelligence approaches. DOCTORAL CONSORTIUM ON KNOWLEDGE DISCOVERY AND DATA MINING. PAISLEY, UK.
56. Corchado, J. M. (2000). Redes Neuronales Artificiales: un enfoque práctico. Universidade Vigo, Departamento de Linguaxes e Sistemas Infomaticos.
57. Corchado, J. M., & Aiken, J. (1998). Expert system for modelling water masses. In WORKSHOP ON DATA MINING. GLASGOW, SCOTLAND.
58. Corchado, J. M., & Aiken, J. (1998). Neuro-symbolic reasoning for real time oceanographic problems. In CONFERENCE ON DATA MINING. IEE, SAVOY PLACE, LONDON.
59. Corchado, J. M., & Aiken, J. (2002). Hybrid artificial intelligence methods in oceanographic forecast models. *Ieee Transactions on Systems Man and Cybernetics Part C-Applications and Reviews*, 32(4), 307–313.
<https://doi.org/10.1109/tsmcc.2002.806072>
60. Corchado, J. M., & Fyfe, C. (1999). Unsupervised neural method for temperature forecasting. *Artificial Intelligence in Engineering*, 13(4), 351–357.
[https://doi.org/10.1016/S0954-1810\(99\)00007-2](https://doi.org/10.1016/S0954-1810(99)00007-2)
61. Corchado, J. M., & Laza, R. (2003). Constructing deliberative agents with case-based reasoning technology. *International Journal of Intelligent Systems*, 18(12), 1227-1241.
62. Corchado, J. M., & Lees, B. (1998). Cognitive models for integrating artificial intelligence approaches. In AII WORKSHOP ON KNOWLEDGE DISCOVERY. GLASGOW, UK.
63. Corchado, J. M., & Lees, B. (1998). Integration ai models. In WORKSHOP ON KNOWLEDGE DISCOVERY AND DATA MINING. PML-NERC, PLYMOUTH LONDON, UK.
64. Corchado, J. M., & Lees, B. (2001). A hybrid case-based model for forecasting. *Applied Artificial Intelligence*, 15(2), 105-127.
65. Corchado, J. M., Aiken, J., Corchado, E. S., & Fdez-Riverola, F. (2005). Evaluating the air–sea interactions and fluxes using an instance-based reasoning system. *AI Communications*, 18(4), 247-256.
66. Corchado, J. M., Borrajo, M. L., Pellicer, M. A., & Yáñez, J. C. (2004). Neuro-symbolic System for Business Internal Control. In *Industrial Conference on Data Mining* (pp. 1–10). https://doi.org/10.1007/978-3-540-30185-1_1
67. Corchado, J. M., Corchado, E. S., & Pellicer, M. A. (2004, September). Design of cooperative agents for mobile devices. In *International Conference on Cooperative Design, Visualization and Engineering* (pp. 205-212). Springer, Berlin, Heidelberg.

68. Corchado, J. M., Corchado, E. S., Aiken, J., Fyfe, C., Fernandez, F., & Gonzalez, M. (2003, June). Maximum likelihood hebbian learning based retrieval method for cbr systems. In *International Conference on Case-Based Reasoning* (Vol. 2689, pp. 107–121). Springer, Berlin, Heidelberg.
69. Corchado, J. M., Laza, R., Borrajo, L., Yañez, J. C., De Luis, A., & Gonzalez-Bedia, M. (2003, July). Agent-based web engineering. In *International Conference on Web Engineering* (pp. 17-25). Springer, Berlin, Heidelberg.
70. Corchado, J. M., Lees, B. (1998). Probis: Modelling intelligence with hybrid systems. In *WORKSHOP ON DATA MINING*. University of GLASGOW, SCOTLAND, UK.
71. Corchado, J. M., Lees, B., & Rees, N. (1997, February). A multi-agent system “test bed” for evaluating autonomous agents. In *Proceedings of the first international conference on Autonomous agents* (pp. 386-393). ACM.
72. Corchado, J. M., Pavón, J., Corchado, E. S., & Castillo, L. F. (2004, August). Development of CBR-BDI agents: a tourist guide application. In *European Conference on Case-based Reasoning* (Vol. 3155, pp. 547–559). Springer, Berlin, Heidelberg.
73. Corchado, J. M., Rees, N., Fyfe, C., & Lees, B. (1997, April). Study and comparison of multilayer perceptron nn and radial basis function nn in oceanographic forecasting. In *Applications and Science of Artificial Neural Networks III* (Vol. 3077, pp. 550-560). International Society for Optics and Photonics.
74. Corchado, J. M., Rees, N., Lees, B., & Aiken, J. (1998). Data mining using example-based methods in oceanographic forecast models.
75. Corchado, J., and Lees, B. (1998). An overview of intelligent frameworks. In *COLLOQUIUM ON INTELLIGENT SYSTEMS*. IEE, LONDON, UK.
76. Corchado, J., and Lees, B. (1998). Artificial neural networks in pattern recognition: multicollinearity and heterocedasticity. In *COLLOQUIUM ON KNOWLEDGE DISCOVERY*. LONDON, UK.
77. Corchado, J., and Lees, B. (1998). Case based reasoning opportunities and technologies. In *CONFERENCE ON KNOWLEDGE DISCOVERY*. IEE, SAVOY PLACE, LONDON.
78. Corchado, J., Fyfe, C., & Lees, B. (1998). Unsupervised learning for financial forecasting. In *Proceedings of the IEEE/IAFE/INFORMS 1998 Conference on Computational Intelligence for Financial Engineering (CIFer)* (Cat. No.98TH8367) (pp. 259–263). <https://doi.org/10.1109/CIFER.1998.690316>
79. Coria, J. A. G., Castellanos-Garzón, J. A., & Corchado, J. M. (2014). Intelligent business processes composition based on multi-agent systems. *Expert Systems with Applications*, 41(4), 1189-1205.
80. Costa, Â., Novais, P., Corchado, J. M., & Neves, J. (2011). Increased performance and better patient attendance in an hospital with the use of smart agendas. *Logic Journal of IGPL*, 20(4), 689-698.
81. Costa, Â., Novais, P., Corchado, J. M., & Neves, J. (2012). Increased performance and better patient attendance in an hospital with the use of smart agendas. *Logic Journal of the IGPL*, 20(4), 689–698. <https://doi.org/10.1093/jigpal/jzr021>

82. Cristian Peñaranda, Jorge Agüero, Carlos Carrascosa, Miguel Rebollo, Vicente Julián (2016). An Agent-Based Approach for a Smart Transport System. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 2
83. Daniel Ayala, Juan C. Roldán, David Ruiz, Fernando O. Gallego (2015). An approach for discovering keywords from Spanish tweets using Wikipedia. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 2
84. Daniel López Sánchez, Angélica González Arrieta, Juan M. Corchado (2019). Visual content-based web page categorization with deep transfer learning and metric learning. Neurocomputing 338: 418-431
85. David García-Retuerta, Álvaro Bartolomé, Pablo Chamoso, Juan Manuel Corchado (2019). Counter-Terrorism Video Analysis Using Hash-Based Algorithms. Algorithms 12(5): 110
86. David Griol, Jose M. Molina (2016). A proposal to manage multi-task dialogs in conversational interfaces. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 2
87. David Griol, Jose Manuel Molina (2016). From VoiceXML to multimodal mobile Apps: development of practical conversational interfaces. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 3
88. David Griol, Jose Manuel Molina (2016). Simulating heterogeneous user behaviors to interact with conversational interfaces. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 4
89. David Griol, Jose Manuel Molina, Araceli Sanchís De Miguel (2014). Developing multimodal conversational agents for an enhanced e-learning experience. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 3, n. 1
90. David Griol, José Molina (2015). Measuring the differences between human-human and human-machine dialogs. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 2
91. Di Mascio, T., Vittorini, P., Gennari, R., Melonio, A., De La Prieta, F., & Alrifai, M. (2012, July). The Learners' User Classes in the TERENCE Adaptive Learning System. In 2012 IEEE 12th International Conference on Advanced Learning Technologies (pp. 572-576). IEEE.
92. Díaz, F., Fdez-Riverola, F., & Corchado, J. M. (2006). gene-CBR: A CASE-BASED REASONING TOOL FOR CANCER DIAGNOSIS USING MICROARRAY DATA SETS. Computational Intelligence, 22(3-4), 254-268.
93. Eduardo Facchini, Eduardo Mario Dias, Alexandre Pelegi Abreu, Maria Lúcia Rebello Pinho Dias (2016). Brazil in Search of Transparency E-Gov. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 1
94. Eduardo Mario Dias, Eduardo Facchini, Antônio Carlos De Moraes, Mauricio Lima Ferreira, Willian Reginato Este, Maria Lúcia Rebello, Pinho Dias (2014). A

- Future Look. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 3, n. 3
95. Eduardo Munera, Jose-Luis Poza-Lujan, Juan-Luis Posadas-Yagüe, Jose-Enrique Simó-Ten, Francisco Blanes (2017). Integrating Smart Resources in ROS-based systems to distribute services. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 6, n. 1
 96. Eduardo Porto Teixeira, Eder M. N. Goncalves, Diana F. Adamatti (2017). Ulises: A Agent-Based System For Timbre Classification. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 6, n. 2
 97. Elton S Siqueira, Patrick Cisuaka Kabongo, Tiancheng Li, Carla D. Castanho, Li Weigang (2016). On Chinese and Western Family Trees: Mechanism and Performance. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 1
 98. Emmanuel Adam, Emmanuelle Grislin-Le Strugeon, René Mandiau (2012). MAS architecture and knowledge model for vehicles data communication. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 1, n. 1
 99. Enyo Gonçalves, Mariela Cortés, Marcos De Oliveira, Nécio Veras, Mário Falcão, Jaelson Castro (2017). An Analysis of Software Agents, Environments and Applications School: Retrospective, Relevance, and Trends. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 6, n. 2
 100. Eva L. Iglesias, Lourdes Borrajo, R. Romero (2014). A HMM text classification model with learning capacity. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 3, n. 3
 101. Fábio Silva, Cesar Analide (2015). Tracking Context-Aware Well-Being through Intelligent Environments. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 2
 102. Fdez-Riverola, F., & Corchado, J. M. (2003). CBR based system for forecasting red tides. *Knowledge-Based Systems*, 16(5–6 SPEC.), 321–328.
[https://doi.org/10.1016/S0950-7051\(03\)00034-0](https://doi.org/10.1016/S0950-7051(03)00034-0)
 103. Fdez-Riverola, F., & Corchado, J. M. (2004). Fsftr: Forecasting system for red tides. *Applied Intelligence*, 21(3), 251-264.
 104. Fdez-Riverola, F., Corchado, J. M., & Torres, J. M. (2002, September). An automated hybrid cbr system for forecasting. In *European Conference on Case-Based Reasoning* (pp. 519-533). Springer, Berlin, Heidelberg.
 105. Fdez-Riverola, F., Díaz, F., & Corchado, J. M. (2004, November). Applying rough sets reduction techniques to the construction of a fuzzy rule base for case based reasoning. In *Ibero-American Conference on Artificial Intelligence* (pp. 83-92). Springer, Berlin, Heidelberg.
 106. Fdez-Riverola, F., Díaz, F., Borrajo, M. L., Yáñez, J. C., & Corchado, J. M. (2005, August). Improving gene selection in microarray data analysis using fuzzy patterns inside a cbr system. In *International Conference on Case-Based Reasoning* (pp. 191-205). Springer, Berlin, Heidelberg.

107. Felicitas Mokom, Ziad Kobti (2013). Interventions via Social Influence for Emergent Suboptimal Restraint Use. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 2, n. 2
108. Fernández Riverola Florentino, Corchado Juan M., Torres Jesús M. (2002). Neuro-symbolic System for Forecasting Red Tides. *AICS 2002*: 45-52
109. Fernández-Riverola, F., & Corchado, J. M. (2003, November). Employing task fuzzy models to automate the revision stage of a cbr system. In *Conference on Technology Transfer* (pp. 302-311). Springer, Berlin, Heidelberg.
110. Fernández-Riverola, F., Díaz, F., & Corchado, J. M. (2007). Reducing the memory size of a Fuzzy case-based reasoning system applying rough set techniques. *IEEE Transactions on Systems, Man and Cybernetics Part C: Applications and Reviews*, 37(1), 138–146.
<https://doi.org/10.1109/TSMCC.2006.876058>
111. Fernando de la Prieta, Sara Rodríguez-González, Pablo Chamoso, Juan Manuel Corchado, Javier Bajo (2019). Survey of agent-based cloud computing applications. *Future Generation Comp. Syst.* 100: 223-236
112. Fraile, J. A., Bajo, J., Corchado, J. M., & Abraham, A. (2010). Applying wearable solutions in dependent environments. *IEEE Transactions on Information Technology in Biomedicine*, 14(6), 1459-1467.
113. Fyfe, C., & Corchado, J. (2002). A comparison of Kernel methods for instantiating case based reasoning systems. *Advanced Engineering Informatics*, 16(3), 165–178. [https://doi.org/10.1016/S1474-0346\(02\)00008-3](https://doi.org/10.1016/S1474-0346(02)00008-3)
114. Fyfe, C., & Corchado, J. M. (2001). Automating the construction of CBR systems using kernel methods. *International Journal of Intelligent Systems*, 16(4), 571–586. <https://doi.org/10.1002/int.1024>
115. Gabriel Santos, Tiago Pinto, Zita Vale, Isabel Praça, Hugo Morais (2016). Enabling Communications in Heterogeneous Multi-Agent Systems: Electricity Markets Ontology. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 5, n. 2
116. Gabriele Di Giammarco, Tania Di Mascio, Michele Di Mauro, Antonietta Tarquinio, Pierpaolo Vittorini (2015). SmartHeart CABG Edu. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 4, n. 1
117. García Coria, J. A., Castellanos-Garzón, J. A., & Corchado, J. M. (2014). Intelligent business processes composition based on multi-agent systems. *Expert Systems with Applications*, 41(4 PART 1), 1189–1205.
<https://doi.org/10.1016/j.eswa.2013.08.003>
118. García, O., Chamoso, P., Prieto, J., Rodríguez, S., & De La Prieta, F. (2017). A serious game to reduce consumption in smart buildings. In *Communications in Computer and Information Science* (Vol. 722, pp. 481–493).
https://doi.org/10.1007/978-3-319-60285-1_41
119. Glez-Bedia, M., Corchado, J. M., Corchado, E. S., & Fyfe, C. (2002). Analytical model for constructing deliberative agents. *International Journal of Engineering Intelligent Systems for Electrical Engineering and Communications*, 10(3).
120. Glez-Peña, D., Díaz, F., Hernández, J. M., Corchado, J. M., & Fdez-Riverola, F. (2009). geneCBR: A translational tool for multiple-microarray analysis and

- integrative information retrieval for aiding diagnosis in cancer research. *BMC Bioinformatics*, 10. <https://doi.org/10.1186/1471-2105-10-187>
121. Gonzalez-Briones, A., Chamoso, P., De La Prieta, F., Demazeau, Y., & Corchado, J. M. (2018). Agreement Technologies for Energy Optimization at Home. *Sensors (Basel)*, 18(5), 1633-1633. doi:10.3390/s18051633
122. González-Briones, A., Chamoso, P., Yoe, H., & Corchado, J. M. (2018). GreenVMAS: virtual organization-based platform for heating greenhouses using waste energy from power plants. *Sensors*, 18(3), 861.
123. González-Briones, A., De La Prieta, F., Mohamad, M., Omatu, S., & Corchado, J. (2018). Multi-agent systems applications in energy optimization problems: A state-of-the-art review. *Energies*, 11(8), 1928.
124. Gonzalez-Briones, A., Prieto, J., De La Prieta, F., Herrera-Viedma, E., & Corchado, J. M. (2018). Energy Optimization Using a Case-Based Reasoning Strategy. *Sensors (Basel)*, 18(3), 865-865. doi:10.3390/s18030865
125. Guillaume Desquesnes, Guillaume Lozenguez, Arnaud Doniec, Éric Duviella (2016). Planning large systems with MDPs: case study of inland waterways supervision. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863)*, Salamanca, v. 5, n. 4
126. Gustavo Isaza, Maria H. Mejía, Luis Fernando Castillo, Adriana Morales, Nestor Duque (2012). Network Management using Multi-Agents System. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863)*, Salamanca, v. 1, n. 3
127. Hafewa Bargaoui, Olfa Belkahla Driss (2014). Multi-Agent Model based on Tabu Search for the Permutation Flow Shop Scheduling Problem. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863)*, Salamanca, v. 3, n. 1
128. Hugo López-Fernández, Miguel Reboiro-Jato, José A. Pérez Rodríguez, Florentino Fdez-Riverola, Daniel Glez-Peña (2016). The Artificial Intelligence Workbench: a retrospective review. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863)*, Salamanca, v. 5, n. 1
129. Ichiro Satoh (2012). Bio-inspired Self-Adaptive Agents in Distributed Systems. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863)*, Salamanca, v. 1, n. 2
130. Inés Sittón-Candanedo, Ricardo S. Alonso, Juan M. Corchado, Sara Rodríguez-González, Roberto Casado-Vara (2019). A review of edge computing reference architectures and a new global edge proposal. *Future Generation Comp. Syst.* 99: 278-294
131. Jaime Rincón, Jose Luis Poza, Juan Luis Posadas, Vicente Julián, Carlos Carrascosa (2016). Adding real data to detect emotions by means of smart resource artifacts in MAS. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863)*, Salamanca, v. 5, n. 4
132. Jamal Ahmad Dargham, Ali Chekima, Ervin Gubin Mounq, Sigeru Omatu (2014). The Effect of Training Data Selection on Face Recognition in Surveillance Application. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863)*, Salamanca, v. 3, n. 4

133. Jean Louis Monino, Soraya Sedkaoui (2016). The Algorithm of the Snail: An Example to Grasp the Window of Opportunity to Boost Big Data. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 3
134. Jesús Ángel Román Gallego, Sara Rodríguez González (2015). Improvement in the distribution of services in multi-agent systems with SCODA. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 3
135. Joana Urbano, Henrique Lopes Cardoso, Ana Paula Rocha, Eugénio Oliveira (2012). Trust and Normative Control in Multi-Agent Systems. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 1, n. 1
136. Jörg Bremer, Sebastian Lehnhoff. (2017) Decentralized Coalition Formation with Agent-based Combinatorial Heuristics. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 6, n. 3
137. Jorge Agüero, Miguel Rebollo, Carlos Carrascosa, Vicente Julián (2013). MDD-Approach for developing Pervasive Systems based on Service-Oriented Multi-Agent Systems. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 3
138. José Alemany, Stella Heras, Javier Palanca, Vicente Julián (2016). Bargaining agents based system for automatic classification of potential allergens in recipes. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 5, n. 2
139. Juan Bullón, Angélica González Arrieta, Ascensión Hernández Encinas, Araceli Queiruga Dios (2017). Manufacturing processes in the textile industry. Expert Systems for fabrics production. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 6, n. 1
140. Juan Carlos Alvarado-Pérez, Diego H. Peluffo-Ordóñez, Roberto Therón (2015). Bridging the gap between human knowledge and machine learning. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 1
141. Juan Castro, Pere Marti-Puig (2014). Real-time Identification of Respiratory Movements through a Microphone. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 3, n. 3
142. Juan M. Corchado, Juan Pavón, Emilio Corchado, Luis Fernando Castillo (2004). Development of CBR-BDI Agents: A Tourist Guide Application. ECCBR 2004: 547-559
143. K. S. Jasmine, Gavani Prathviraj S., P Ijantakar Rajashekar, K. A. Sumithra Devi (2013). Inference in Belief Network using Logic Sampling and Likelihood Weighing algorithms. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 3
144. Koetsier, J., Corchado, E., MacDonald, D., Corchado, J., & Fyfe, C. (2004, June). Kernel maximum likelihood hebbian learning. In *International Conference on Computational Science* (pp. 650-653). Springer, Berlin, Heidelberg.

145. Laza, R., Pavn, R., & Corchado, J. M. (2004). A reasoning model for CBR_BDI agents using an adaptable fuzzy inference system. In *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (Vol. 3040, pp. 96–106). Springer, Berlin, Heidelberg.
146. Laza, R., Pavón, R., & Corchado, J. M. (2003, November). A reasoning model for CBR_BDI agents using an adaptable fuzzy inference system. In *Conference on Technology Transfer* (pp. 96-106). Springer, Berlin, Heidelberg.
147. Lees, B., & Corchado, J. (1999, March). Integrated case-based neural network approach to problem solving. In *German Conference on Knowledge-Based Systems* (pp. 157-166). Springer, Berlin, Heidelberg.
148. Leonardo Ochoa-Aday, Cristina Cervelló-Pastor, Adriana Fernández-Fernández (2016). Discovering the Network Topology: An Efficient Approach for SDN. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 5, n. 2
149. Leonor Becerra-Bonache, M. Dolores Jiménez López (2014). Linguistic Models at the Crossroads of Agents, Learning and Formal Languages. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 3, n. 4
150. Li, T., Sun, S., Corchado, J. M., & Siyau, M. F. (2014). A particle dyeing approach for track continuity for the SMC-PHD filter. In *FUSION 2014 - 17th International Conference on Information Fusion*. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84910637583&partnerID=40&md5=709eb4815eaf544ce01a2c21aa749d8f>
151. Li, T., Sun, S., Corchado, J. M., & Siyau, M. F. (2014). Random finite set-based Bayesian filters using magnitude-adaptive target birth intensity. In *FUSION 2014 - 17th International Conference on Information Fusion*. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84910637788&partnerID=40&md5=bd8602d6146b014266cf07dc35a681e0>
152. Lima, A. C. E. S., De Castro, L. N., & Corchado, J. M. (2015). A polarity analysis framework for Twitter messages. *Applied Mathematics and Computation*, 270, 756–767. <https://doi.org/10.1016/j.amc.2015.08.059>
153. Lucas Fernando Souza De Castro, Gleifer Vaz Alves, André Pinz Borges (2017). Using trust degree for agents in order to assign spots in a Smart Parking. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 6, n. 2
154. Manuel Gómez Zotano, Jorge Gómez-Sanz, Juan Pavón (2015). User Behavior in Mass Media Websites. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 4, n. 3
155. Marco Antonio Ameller, María Angélica González (2016). Minutiae filtering using ridge-valley method. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 5, n. 1
156. Margherita Brondino, Gabriella Dodero, Rosella Gennari, Alessandra Melonio, Daniela Raccanello, Santina Torello (2014). Achievement Emotions and Peer Acceptance Get Together in Game Design at School. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 3, n. 4

157. Marisol García-Valls (2016). Prototyping low-cost and flexible vehicle diagnostic systems. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 5, n. 4
158. Mata, A., & Corchado, J. M. (2009). Forecasting the probability of finding oil slicks using a CBR system. *Expert Systems with Applications*, 36(4), 8239–8246. <https://doi.org/10.1016/j.eswa.2008.10.003>
159. Méndez, J. R., Fdez-Riverola, F., Díaz, F., Iglesias, E. L., & Corchado, J. M. (2006). A comparative performance study of feature selection methods for the anti-spam filtering domain. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 4065 LNAI, 106–120. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-33746435792&partnerID=40&md5=25345ac884f61c182680241828d448c5>
160. Méndez, J. R., Fdez-Riverola, F., Iglesias, E. L., Díaz, F., & Corchado, J. M. (2006, September). Tracking concept drift at feature selection stage in spamhunting: An anti-spam instance-based reasoning system. In *European conference on case-based reasoning* (pp. 504-518). Springer, Berlin, Heidelberg.
161. Méndez, J. R., Iglesias, E. L., Fdez-Riverola, F., Díaz, F., & Corchado, J. M. (2005, November). Tokenising, stemming and stopword removal on anti-spam filtering domain. In *Conference of the Spanish Association for Artificial Intelligence* (pp. 449-458). Springer, Berlin, Heidelberg.
162. Miguel Oliver, José Pascual Molina, Antonio Fernández-Caballero, Pascual González. (2017) Collaborative Computer-Assisted Cognitive Rehabilitation System. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 6, n. 3
163. Miki Ueno, Naoki Mori, Keinosuke Matsumoto (2012). Picture information shared conversation agent: Pictgent. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 1, n. 1
164. Miki Ueno, Naoki Mori, Keinosuke Matsumoto (2014). Picture models for 2-scene comics creating system. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 3, n. 2
165. Miki Ueno, Toshinori Suenaga, Hitoshi Isahara (2017). Classification of Two Comic Books based on Convolutional Neural Networks. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 6, n. 1
166. Ming Fei Siyau, Tiancheng Li, Jonathan Loo (2014). A Novel Pilot Expansion Approach for MIMO Channel Estimation. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 3, n. 3
167. Mohamed Frikha, Mohamed Mhiri, Faiez Gargouri (2015). A Semantic Social Recommender System Using Ontologies Based Approach For Tunisian Tourism. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 4, n. 1
168. Morente-Molinera, J. A., Kou, G., González-Crespo, R., Corchado, J. M., & Herrera-Viedma, E. (2017). Solving multi-criteria group decision making

- problems under environments with a high number of alternatives using fuzzy ontologies and multi-granular linguistic modelling methods. *Knowledge-Based Systems*, 137, 54-64.
169. Muhammad Akmal bin Remli, Mohd Saberi Mohamad, Safaai Deris, Azurah A. Samah, Sigeru Omatu, Juan M. Corchado (2019) Cooperative enhanced scatter search with opposition-based learning schemes for parameter estimation in high dimensional kinetic models of biological systems. *Expert Syst. Appl.* 116: 131-146
 170. Muñoz, M., Rodríguez, M., Rodríguez, M. E., & Rodríguez, S. (2012). Genetic evaluation of the class III dentofacial in rural and urban Spanish population by AI techniques. *Advances in Intelligent and Soft Computing* (Vol. 151 AISC).
 171. Nadia Alam, Munira Sultana, M.S. Alam, M. A. Al-Mamun, M. A. Hossain (2013). Optimal Intermittent Dose Schedules for Chemotherapy Using Genetic Algorithm. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 2, n. 2
 172. Nuno Trindade, Luis Antunes (2013). An Architecture for Agent's Risk Perception. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 2, n. 2
 173. Omar Jassim, Moamin Mahmoud, Mohd Sharifuddin Ahmad (2014). Research Supervision Management Via A Multi-Agent Framework. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 3, n. 4
 174. Pablo Chamoso, Alfonso González-Briones, Alberto Rivas, Fernando de la Prieta, Juan M. Corchado (2019) Social computing in currency exchange. *Knowl. Inf. Syst.* 61(2): 733-753
 175. Pablo Chamoso, Fernando De La Prieta (2015). Simulation environment for algorithms and agents evaluation. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 4, n. 3
 176. Pablo Chamoso, Henar Pérez-Ramos, Ángel García-García (2014). ALTAIR: Supervised Methodology to Obtain Retinal Vessels Caliber. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 3, n. 4
 177. Palomino, C. G., Nunes, C. S., Silveira, R. A., González, S. R., & Nakayama, M. K. (2017). Adaptive agent-based environment model to enable the teacher to create an adaptive class. *Advances in Intelligent Systems and Computing* (Vol. 617). https://doi.org/10.1007/978-3-319-60819-8_3
 178. Paula Andrea Rodríguez Marín, Mauricio Giraldo, Valentina Tabares, Néstor Duque, Demetrio Ovalle (2016). Educational Resources Recommendation System for a heterogeneous Student Group. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 5, n. 3
 179. Paula Andrea Rodríguez Marín, Néstor Duque, Demetrio Ovalle (2015). Multi-agent system for Knowledge-based recommendation of Learning Objects. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 4, n. 1

180. Pavón, J., & Corchado, J. (2004). Agents for the web. *International journal of Web engineering and technology*, 1(4), 393-396.
181. Pavón, J., Corchado, J. M., Gómez-Sanz, J. J., & Ossa, L. F. C. (2004, October). Mobile tourist guide services with software agents. In *International Workshop on Mobile Agents for Telecommunication Applications* (pp. 322-330). Springer, Berlin, Heidelberg.
182. Pawel Pawlewski, Paulina Golinska, Paul-Eric Dossou (2012). Application potential of Agent Based Simulation and Discrete Event Simulation in Enterprise integration modelling concepts. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 1, n. 1
183. Pérez, A., Chamoso, P., Parra, V., & Sánchez, A. J. (2014). Ground Vehicle Detection Through Aerial Images Taken by a UAV. In *Information Fusion (FUSION), 2014 17th International Conference on*.
184. Pilar Carrión, Rosalía Laza, Encarnación González-Rufino, Juan M. Corchado (1999). Knowledge Management with an Agent Network. *LANOMS 1999*
185. Prieto, J., Alonso, A. A., de la Rosa, R., & Carrera, A. (2014). Adaptive Framework for Uncertainty Analysis in Electromagnetic Field Measurements. *Radiation Protection Dosimetry*, ncu260.
186. Prieto, J., Mazuelas, S., Bahillo, A., Fernandez, P., Lorenzo, R. M., & Abril, E. J. (2012). Adaptive data fusion for wireless localization in harsh environments. *IEEE Transactions on Signal Processing*, 60(4), 1585–1596.
187. Prieto, J., Mazuelas, S., Bahillo, A., Fernández, P., Lorenzo, R. M., & Abril, E. J. (2013). Accurate and Robust Localization in Harsh Environments Based on V2I Communication. In *Vehicular Technologies - Deployment and Applications*. INTECH Open Access Publisher.
188. Rafael Cauê Cardoso, Rafael Heitor Bordini. (2017) A Multi-Agent Extension of a Hierarchical Task Network Planning Formalism. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 6, n. 2
189. Rafhael Cunha, Cleo Billa, Diana Adamatti (2017). Development of a Graphical Tool to integrate the Prometheus AEOLus methodology and Jason Platform. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 6, n. 2
190. Ricardo Azambuja Silveira, Rafaela Lunardi Comarella, Ronaldo Lima Rocha Campos, Jonas Vian, Fernando De La Prieta (2015). Learning Objects Recommendation System: Issues and Approaches for Retrieving, Indexing and Recomend Learning Objects. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 4, n. 4
191. Ricardo Faia, Tiago Pinto, Zita Vale (2016). Dynamic Fuzzy Clustering Method for Decision Support in Electricity Markets Negotiation. *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* (ISSN: 2255-2863), Salamanca, v. 5, n. 1
192. Ricardo S. Alonso, Javier Prieto, Óscar García, Juan M. Corchado (2019). Collaborative learning via social computing. *Frontiers of IT & EE* 20(2): 265-282
193. Ricardo Silveira, Guilherme Klein Da Silva Bitencourt, Thiago Ângelo Gelaim, Jerusa Marchi, Fernando De La Prieta (2015). Towards a Model of Open and

- Reliable Cognitive Multiagent Systems: Dealing with Trust and Emotions. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 3
194. Roberto Garcia-Martin, Alfonso González-Briones, Juan M. Corchado (2019). SmartFire: Intelligent Platform for Monitoring Fire Extinguishers and Their Building Environment. *Sensors* 19(10): 2390
 195. Rodolfo Salazar, José Carlos Rangel, Cristian Pinzón, Abel Rodríguez (2013). Irrigation System through Intelligent Agents Implemented with Arduino Technology. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 3
 196. Rodríguez-Fernandez J., Pinto T., Silva F., Praça I., Vale Z., Corchado J.M. (2018) Reputation Computational Model to Support Electricity Market Players Energy Contracts Negotiation. In: Bajo J. et al. (eds) Highlights of Practical Applications of Agents, Multi-Agent Systems, and Complexity: The PAAMS Collection. PAAMS 2018. Communications in Computer and Information Science, vol 887. Springer, Cham
 197. Rodríguez, J. M. C. (2000). Neuro-symbolic model for real-time forecasting problems (Doctoral dissertation, University of Paisley).
 198. Rodríguez, S., de La Prieta, F., Tapia, D. I., & Corchado, J. M. (2010, June). Agents and computer vision for processing stereoscopic images. In *International Conference on Hybrid Artificial Intelligence Systems* (pp. 93-100). Springer, Berlin, Heidelberg.
 199. Rodríguez, S., Gil, O., De La Prieta, F., Zato, C., Corchado, J. M., Vega, P., & Francisco, M. (2010). People detection and stereoscopic analysis using MAS. In *INES 2010 - 14th International Conference on Intelligent Engineering Systems, Proceedings*. <https://doi.org/10.1109/INES.2010.5483855>
 200. Rodríguez, S., Tapia, D. I., Sanz, E., Zato, C., De La Prieta, F., & Gil, O. (2010). Cloud computing integrated into service-oriented multi-agent architecture. *IFIP Advances in Information and Communication Technology* (Vol. 322 AICT). https://doi.org/10.1007/978-3-642-14341-0_29
 201. Román, J. A., Rodríguez, S., & de da Prieta, F. (2016). Improving the distribution of services in MAS. *Communications in Computer and Information Science* (Vol. 616). https://doi.org/10.1007/978-3-319-39387-2_4
 202. Rosalía Laza, A. Gómez, Reyes Pavón, Juan M. Corchado (2002). A Case-Based Reasoning Approach to the Implementation of BDI Agents. *ECCBR Workshops 2002*: 27-30
 203. Saadi Bin Ahmad Kamaruddin, Nor Azura Md Ghanib, Choong-Yeun Liong, Abdul Aziz Jemain (2012). Firearm Classification using Neural Networks on Ring of Firing Pin Impression Images. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 1, n. 3
 204. Sandrine Mouysset, Ronan Guivarch, Joseph Noailles, Daniel Ruiz (2013). Segmentation of cDNA Microarray Images using Parallel Spectral Clustering. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 1
 205. Sérgio Matos, Hugo Araújo, José Luís Oliveira (2013). Biomedical Literature Exploration through Latent Semantics. ADCAIJ: Advances in Distributed

- Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 2
206. Sigeru Omatu, Tatsuyuki Wada, Pablo Chamoso (2013). Odor Classification using Agent Technology. DCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 4
 207. Silvia Rossi, Francesco Barile, Antonio Caso (2015). Dominance Weighted Social Choice Functions for Group Recommendations. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 1
 208. Sittón, I., & Rodríguez, S. (2017). Pattern Extraction for the Design of Predictive Models in Industry 4.0. In International Conference on Practical Applications of Agents and Multi-Agent Systems (pp. 258–261).
 209. Sumit Goyal, Gyanendra Kumar Goyal (2013). Machine Learning ANN Models for Predicting Sensory Quality of Roasted Coffee Flavoured Sterilized Drink. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 2, n. 3
 210. Tapia, D. I., & Corchado, J. M. (2009). An ambient intelligence based multi-agent system for alzheimer health care. International Journal of Ambient Computing and Intelligence, v 1, n 1(1), 15–26.
<https://doi.org/10.4018/jaci.2009010102>
 211. Tapia, D. I., Fraile, J. A., Rodríguez, S., Alonso, R. S., & Corchado, J. M. (2013). Integrating hardware agents into an enhanced multi-agent architecture for Ambient Intelligence systems. Information Sciences, 222, 47-65.
 212. Tiago Pinto, Hugo Morais, Juan Manuel Corchado (2019). Adaptive entropy-based learning with dynamic artificial neural network. Neurocomputing 338: 432-440
 213. Tiancheng Li, Hongqi Fan, Jesús García, Juan M. Corchado (2019). Second-order statistics analysis and comparison between arithmetic and geometric average fusion: Application to multi-sensor target tracking. Information Fusion 51: 233-243
 214. Tiancheng Li, Huimin Chen, Shudong Sun, Juan M. Corchado (2019). Joint Smoothing and Tracking Based on Continuous-Time Target Trajectory Function Fitting. IEEE Trans. Automation Science and Engineering 16(3): 1476-1483
 215. Tiancheng Li, Juan M. Corchado, Shudong Sun (2019). Partial Consensus and Conservative Fusion of Gaussian Mixtures for Distributed PHD Fusion. IEEE Trans. Aerospace and Electronic Systems 55(5): 2150-2163
 216. Vicente Julián, Martí Navarro, Vicente Botti, Stella HERAS (2015). Towards Real-Time Argumentation. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 4, n. 4
 217. Víctor Corcoba Magaña, Mario Muñoz Organero, Juan Antonio Álvarez-García, Jorge Yago Fernández Rodríguez. (2017) Design of a Speed Assistant to Minimize the Driver Stress. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 6, n. 3
 218. Vincenza Cofini, Fernando De La Prieta, Tania Di Mascio, Rosella Gennari, Pierpaolo Vittorini (2012). Design Smart Games with requirements, generate

- them with a Click, and revise them with a GUIs. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 1, n. 3
219. Valérian Guivarch, Valérie Camps, André Péninou (2012). AMADEUS: an adaptive multi-agent system to learn a user's recurring actions in ambient systems. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 1, n. 3
 220. Vanessa N. Cooper, Hisham M. Haddad, Hossain Shahriar (2014). Android Malware Detection Using Kullback-Leibler Divergence. ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal (ISSN: 2255-2863), Salamanca, v. 3, n. 2
 221. Xiomara Patricia Blanco Valencia, M. A. Becerra, A. E. Castro Ospina, M. Ortega Adarme, D. Viveros Melo, D. H. Peluffo Ordóñez (2017). Kernel-based framework for spectral dimensionality reduction and clustering formulation: A theoretical study.